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ABSTRACT

This research report documents the development of the Reading Recovery Program in the United States from its inception in 1984. The report provides summaries of the various empirical studies that have been conducted. The report concludes that: (1) evidence from the first years of implementation indicates that Reading Recovery has had positive outcomes for children initially determined to be at risk for failure in reading; (2) children retain their gains and continue to make progress at least 3 years after the intervention; (3) classroom teachers and parents have responded positively to the programs; and (4) Reading Recovery Teachers have reported growth in knowledge and in skill in teaching reading. (RS)

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The Ohio State University
College of Education

National Diffusion Network
An NDN Developer/Demonstrator Project

. . . Linking Schools, Universities, and State Agencies to help young children at risk of failure in reading.

No. 4 December, 1989

ED327818

Reading Recovery 1984-1989

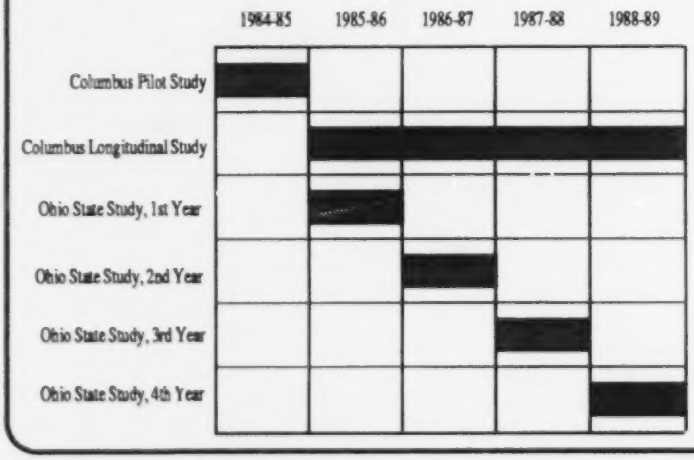
"I think it helped my daughter tremendously . . . I would recommend it to anyone whose child has trouble reading. My other kids, who are older, are sti'l struggling . . . my second grader is helping my fourth grader learn how to read. She wants to read now. She brings home books. I can't believe the change in her." This observation was made by the parent of a child who completed Reading Recovery successfully in first grade in an interview with reporter Alan Johnson, The Columbus Dispatch, *October 23, 1989.*

It hardly seems possible that one could be a failure at six or seven years old, but that is exactly what happens to some first graders. They experience confusion, frustration, and anxiety over something that is fairly natural for most children: learning how to read. In a few short but critical months, educational life passes them by, and they begin a pattern of thinking that tells them they can't do things in school very well; this pattern may last for years. Reading Recovery stops the clock for these children at the point when they are beginning to view themselves as less-than-competent readers and gives them a second chance. Procedures developed by New Zealand educator and psychologist Marie M. Clay are used to provide intensive individual help to students and to turn the potential cycle of failure around in a comparatively short period of time. The goal of Reading Recovery is not to remediate deficits, but to assist each child in developing as an independent reader with an internal system for self-improvement.

This report documents the development of the Reading Recovery program in the United States from its inception in 1984. Summaries of the various empirical studies that have been conducted are given, with references to more detailed technical reports and research articles provided in the bibliography. The research program conducted by faculty from The Ohio State University includes data from the 1984 pilot study for the program, the longitudinal studies of the first children in the program, and the research questions posed each year for all Reading Recovery sites in the state of Ohio.

In September, 1984, educators from Columbus City Schools, The Ohio State University, and the Ohio Department of Education began a collaborative project to pilot the Reading Recovery Program for first grade students at risk of failure in reading. The effort was supported by grants from the Martha Holden Jennings Foundation, the Columbus

Figure 1. Studies of Reading Recovery in Ohio.



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Foundation, and The Ohio State University. Based on the positive results of the pilot effort, the Reading Recovery Program was expanded in Columbus, and through funding from the Ohio General Assembly regional training sites were designated throughout the state to implement the Reading Recovery program. Recognition and funding of Reading Recovery as a Developer/Demonstrator Project by the U.S. Department of Education's National Diffusion Network (NDN) has supported the expansion of Reading Recovery to school districts in other states.

Reading Recovery: An Early Intervention Program.

Program for Children. The program targets the poorest readers in first grade classrooms. In addition to their regular classroom activities, children are provided one-to-one planned lessons for 30 minutes each day by a specially trained teacher. Each lesson includes reading many "little" books and composing and writing a message or brief story. During these holistic reading and writing tasks, teachers use special techniques to build on the child's strengths as a learner and to develop the effective strategies that research shows good readers use.

Writing opportunities are considered essential for gaining control in understanding written messages. Through daily writing, children develop strategies for hearing sounds in words and for monitoring and checking their own reading. Every day the child also is introduced to a new book that will be read independently the next day. The individual instruction continues until the child has developed effective strategies for independent learning and can function satisfactorily without extra help in regular classroom reading. Then the intervention is "discontinued" and another child is given an opportunity to participate in Reading Recovery.

Teacher Inservice Program. To implement Reading Recovery, teachers need intensive training over the period of one year; however, no time is lost in providing services to children. As teachers receive training they simultaneously implement the program with children. Through clinical and peer-critiquing experiences guided by a skilled teacher leader, teachers learn to use diagnostic techniques and strategies for conducting lessons. Extensive use is made of a one-way glass for demonstration and observation. Teachers become sensitive observers of children's reading and writing behavior and develop skill in making moment-to-moment diagnoses to inform instruction.

Reading Recovery teacher leaders receive additional preparation through a year-long course of study at The Ohio State University that involves intensive clinical and internship experiences. After training, leaders are qualified to teach a group of Reading Recovery teachers.

Selection of Children. Children from the lowest 20% of their classrooms are selected for Reading Recovery using classroom teacher judgment and results from the Diagnostic Survey. The following six measures comprise the Diagnostic Survey.

1) LETTER IDENTIFICATION: Children are asked to identify 54 different characters, including upper and lower case letters.

2) WORD TEST: Children are asked to read down a list of 20 words drawn from the most frequent words from the preprimers in use in the district.

3) CONCEPTS ABOUT PRINT: Children are asked to perform a variety of tasks during a book reading. The tasks represent a standard situation to check on significant concepts about printed language, such as directionality and concept of word.

4) WRITING VOCABULARY: Within a 10-minute period, children are asked to write all the words they know. The score on this test is the number of words spelled accurately.

5) DICTATION TEST: Testers read a sentence to the children who are to write the words, indicating their ability to analyze the word for sounds.

6) TEXT READING LEVEL: Measures of Text Reading Level are obtained by constructing a gradient of difficulty of text, then testing for the highest level read with accuracy of 90% or better. Levels are drawn from a basal reading system that is not part of Reading Recovery instruction.

New Zealand Research. Results of the program in New Zealand (Clay, 1979a, 1979b, 1982) indicate that children "at risk" of failure made accelerated progress while receiving the individual tutoring. After an average of 12 to 14 weeks in the program, almost all Reading Recovery children had caught up with their peers and needed no further extra help. Three years later, children still retained their gains and continued to make progress at average rates.

Columbus Pilot Project. In 1984-

1985, Marie Clay and Barbara Watson, National Director of Reading Recovery in New Zealand, came to The Ohio State University to train Reading Recovery teachers and teacher leaders. As part of the training, these teachers piloted Reading Recovery in six Columbus Public Schools from January through May 1985. Positive results of the pilot project encouraged the Columbus Public Schools to proceed with implementation of the Reading Recovery program in the 1985-86 school year and to initiate a longitudinal study of the effects of Reading Recovery.

Columbus Study Year 1 (1985-1986)

Purpose. The major objective during 1985-1986 was to determine whether Reading Recovery was an effective intervention program in Columbus, Ohio during the first full year of operation after the pilot study.

Teachers. Thirty-two Reading Recovery teachers were involved in the 1985-1986 project. Of these, 12 had received their Reading Recovery training during the previous (pilot) year; another 20 were new Reading Recovery teachers who received their training during 1985-1986. For Reading Recovery teachers, a sharing arrangement was used in which two teachers trained in Reading Recovery were paired and shared one first-grade class; each teacher spent half the day teaching the whole class, and the other half tutoring Reading Recovery children. Teachers who taught children in the remaining classes in each building were not trained in Reading Recovery.

Children. Children falling in the lowest 20% of their classrooms in reading achievement were identified using a combination of scores on the Diagnostic Survey and teacher judgment. Low-achieving students from classrooms shared by Reading Recovery trained teachers (called "program classrooms") went into the Reading Recovery program. From other first grade classrooms (termed "regular" in this study), students in the lowest 20% of the class were randomly assigned to either Reading Recovery or an alternative compensatory reading program. For research purposes, Reading Recovery children were defined as those children, from either program or regular classrooms, who received 60 or more lessons or were discontinued (successfully released) from the program. Comparison children were served all year long in the alternative compensatory program. No children were served by both programs.

Research Questions 1985-1986.
1) How did Reading Recovery children (discontinued and not discontinued) and Comparison children perform at the end of grade one on a variety of measures of reading ability?

2) What proportion of discontinued Reading Recovery children (those who were successfully released from the program) achieved end-of-year scores equivalent to the average band of achievement of a random sample of first-grade students?

3) How did Reading Recovery and Comparison children perform at the end of grade one on nationally normed standardized tests?

Procedures. In October and May the research children (Reading Recovery children and Comparison children) were assessed on eight dependent measures: (1) Letter Identification; (2) Word Test; (3) Concepts About Print; (4) Writing Vocabulary; (5) Dictation; (6) Text Reading; (7) a writing sample; and (8) two subtests of the Comprehensive Tests of Basic Skills (Reading Vocabulary and Reading Comprehension).

To provide perspective for comparing at risk children with a group of average readers, a random sample of first grade students in project schools (N=102) was tested on the first seven dependent measures listed above. The "average band" (defined as $\pm$ .5 standard deviation above and below the mean) of "regular" classrooms was calculated for each of the seven measures.

Results and Analysis. Of the 136 children assigned to Reading Recovery in September 1985, 73.5 percent were successfully discontinued from the program at various times during the school year and received no further treatment. These successfully discontinued children received an average of 67 thirty-minute lessons. The other 26.5 percent of children had not been discontinued by the end of the school year.

Question #1: Measures of reading ability. Means and standard deviations were calculated for each of three groups: (1) Reading Recovery children; (2) Comparison children; (3) random sample of average first graders (May scores only). Multivariate analysis (Hotellings T^2) indicated significant differences between Reading Recovery children and Comparison children. Reading Recovery children excelled on the Basal Word Test, Concepts About Print, Writing Vocabulary, Dictation, Text Reading, Writing Sample, and CTBS Reading Vocabulary and Comprehension. All children achieved close to perfect perform-

ance on Letter Identification and the Basal Word Test.

Question #2: Discontinued Reading Recovery students in average band range. The end-of-year scores of successfully discontinued Reading Recovery children were compared with those of the average band calculated from a random sample of students from regular classrooms and not involved in the study. Over 90% of the discontinued students met or exceeded the average range on Text Reading, Letter Identification, Word Test, and Dictation. More than 70% met or exceeded the average band performance on all other measures.

Question #3: Performance on nationally normed tests. Results from a nationally normed standardized test indicated that Reading Recovery children had an NCE gain score of 8.6 compared to the Comparison children gain score of -2.4 for Total Reading on the CTBS.

Follow-Up Studies for the Columbus Project

Children who received Reading Recovery intervention during the first full year of implementation were followed for three years in order to provide insights into the long-range effectiveness of the Reading Recovery program.

Research Questions 1986-1989.
1) How did the performance of Reading Recovery children (successfully discontinued and not-discontinued) compare with the performance of Comparison children on Text Reading ability at the end of second, third, and fourth grades?

2) Do successfully discontinued Reading Recovery children sustain the gains they achieved in first grade through second, third, and fourth grades, without any further intervention?

Procedures. In May 1987, one year after the intervention, Reading Recovery and Comparison children were assessed on their Text Reading level. To provide perspective for the scores of both groups, a random sample of second-grade children was selected from regular classrooms in project schools and administered the Text Reading test. A similar testing process was conducted in May 1988, at the end of third grade, and again in May 1989, at the end of fourth grade. An average band for Text Reading Level was calculated for second graders in 1987, for third graders in 1988, and for fourth graders in 1989. The average band was defined as ± .5 standard deviation from the mean of the Random Sample.

Results and Analysis.
Question #1: Text reading ability. Scores comparing Reading Recovery children and Comparison children in May 1987, May 1988, and May 1989 are graphically illustrated in Figure 2. As shown here, Reading Recovery children maintained the differences between

Figure 2. Columbus Follow-Up Studies: Text Reading Ability Of Reading Recovery (Successfully Discontinued and Not Discontinued) and Comparison Children

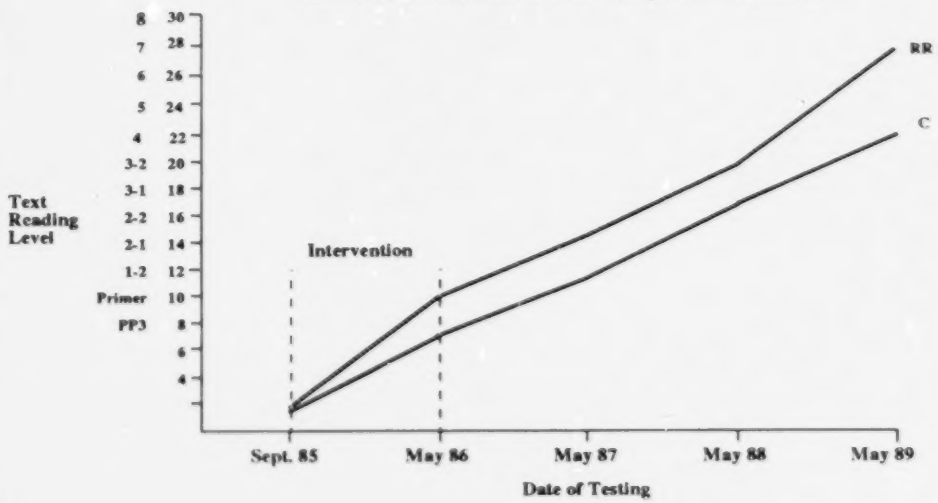

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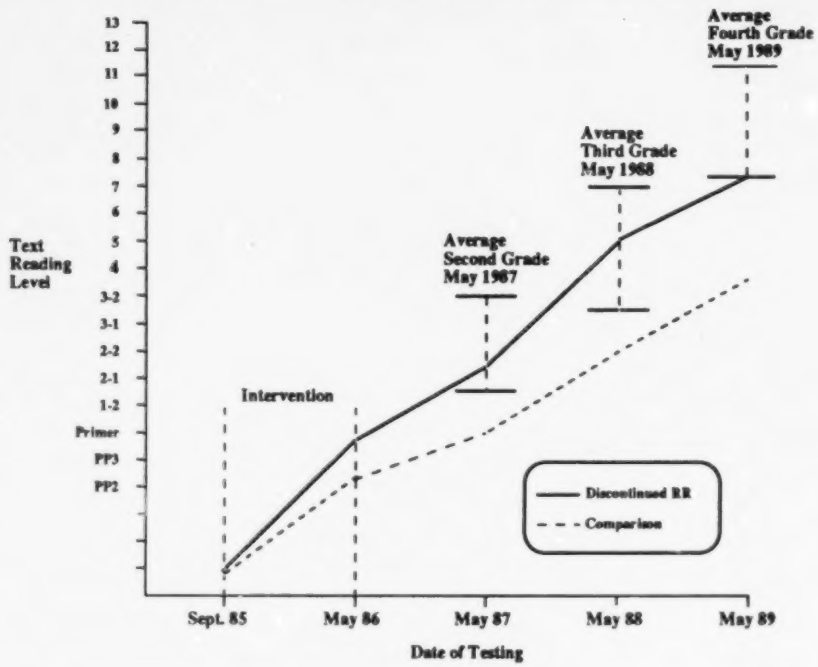
Figure 3. Columbus Follow-Up Studies: Sustained Effects.



the two groups that they had achieved by the end of the initial first-grade intervention.

Question #2: Sustained effects. Results of the follow-up data on successfully discontinued children are graphically illustrated in Figure 3. These results provide evidence that a high proportion of successfully discontinued children continued to make progress for at least three full years after their individual Reading Recovery intervention had taken place. At the end of first, second, and third grades, successfully discontinued children as a group scored within the average band of the random sample of first graders in their project schools. At the end of fourth grade, the mean Text Reading Level of discontinued Reading Recovery children was close to that of the average band for their grade level. The 1989 average band calculation, it should be noted, was based on a small random sample of students. The Text Reading Levels for this "average" group of fourth graders range between grades seven and twelve, reflecting unusually high Text Reading Levels within this small number of students. Longitudinal data show that as a group discontinued Reading Recovery children continue to perform at a level appropriate for their grade placement for three years following their Reading Recovery year, without the need of any further intervention.

In the follow-up study of the 1985-1986 cohort, both third and fourth grade students were assessed on reading and spelling. The numbers of students within each group had been reduced by attrition and students from the 12 original schools were located in 72 different Columbus schools. Third grade students represented those students who at some point in their previous school years had been retained. That situation was less likely to occur among the random sample, since that group had been selected entirely from third grade students in Spring, 1988. The groups were distributed by grade level in the following manner: Reading Recovery (n = 112) had 64 fourth graders and 48 third graders; Random Sample (n = 59) had 57 fourth graders and 2 third graders; the Comparison group (n = 39) had 20 fourth graders and 19 third graders. Of the 70 discontinued Reading Recovery students, 54 (77.0%) were in fourth grade and thus had followed a normal school progression.

Graded spelling tests were administered to students in the study. An average band comparison showed that 53.8 percent of the total Reading Recovery group, 47.4 percent of the Comparison group, and 51.8 percent of the Random Sample group fell within average to above average categories on spelling accuracy as fourth graders.

An additional standardized measure, Woodcock Reading Mastery (1988) was administered to the three groups of children in the study. Fourth grade students were compared to the average band. Scores were distributed in the following manner: for the total Reading Recovery group, 70.3% scored within or above the average band; for the Random Sample, 80.7% scored within or above the average band; for the Comparison group, 50.0% scored at or above the average band. The group of Discontinued Reading Recovery students was also compared to the average band; 77.8% scored within or above average range.

All average band analyses were based on raw scores. At this point in time, the distribution of scores within all groups is very wide; thus, average band analyses should be interpreted with caution. The comparison with an average band is appropriate and useful in the early grades when narrower distributions occur. It may not be as useful in the upper grades.

Grade equivalent scores for total groups were computed based on the Woodcock Reading Mastery test. Both Reading Recovery and Comparison groups included a number of third grade students who had not followed the normal school progression and thus had not been given fourth grade learning opportunities. The Random Sample group included only 2 students who were in third grade. Thus, retention operated as a confounding variable in this comparison. For total groups, grade equivalent scores were as follows: Random Sample, 3.80; Reading Recovery, 2.99; and Comparison, 2.86. Discontinued Reading Recovery children had a mean grade equivalent score of 3.54. Grade equivalent scores were reexamined using only those children who had followed a normal grade progression. For fourth grade students in all groups, grade equivalent scores were as follows: Random Sample, 3.86 (n = 57); Reading Recovery, 3.43 (n = 64); and Comparison, 3.23 (n = 21). The grade equivalent score for fourth grade Discontinued Reading Recovery students (n = 54) was 3.66.

Discontinued Reading Recovery children (73% of the original group) were very similar to the Random Sample of Columbus fourth graders, but all groups scored below national norms on this standardized measure. Yet reading assessments by objective testers indicated that both Reading Recovery and Random Sample students could read and understand material at much higher levels of difficulty than indicated by the Woodcock. Another study of the same subjects (see DeFord, National Reading Conference Yearbook, 1989) indicates that these students could read much more difficult texts than those in which they were placed for classroom instruction. Text Reading Level and Woodcock Reading Mastery test are measuring different reading abilities for all students. Text Reading level assesses a child's ability to deal with continuous texts typical to a particular grade level. There is less discrepancy between the Woodcock results and the actual basal reader placements of students in all groups, including the Random Sample. It may be that the Woodcock tests the same skills in reading that are assessed in the basal reading program mastery tests. Teachers reported using the basal reading program tests and the previous year's placement as their major source of information. The achievement level of students in this entire age cohort warrants further examination.

Ohio Reading Recovery Project (1985-1989)

Based on the positive results of the 1984-1985 pilot study in Columbus, the Ohio General Assembly agreed to provide financial support to implement a statewide Reading Recovery program. The Ohio Department of Education developed a four-year plan to implement an intervention program.

1985-1986. In 1985-1986, 24 teacher leaders representing Reading Recovery sites distributed geographically throughout the State of Ohio were enrolled in the training program held at The Ohio State University. Leaders were selected for experience and leadership; each teacher leader had a master's degree as part of the qualifications for the training program. Each leader taught four children each day in Reading Recovery lessons and completed various other responsibilities in their districts. One day a week throughout the year, leaders traveled to The Ohio State University for an all-day training session where they learned Reading Recovery diagnostic and intervention procedures, participated in demonstration lessons using the one-way glass, and acquired the theoretical and practical knowledge needed to perform the teacher leader role the following year.

1986-1987. During the following year, trained teacher leaders taught 235 teachers at 23 regional sites in Ohio. An additional 22 teacher leaders began training. The state project in 1986-1987 involved 198 schools in 121 school districts. The student population represented a

wide geographic distribution and included students from urban, suburban, and rural districts. A total population of 1,370 students statewide had at least 60 Reading Recovery lessons or were successfully discontinued. These children were considered in the evaluation study.

1987-1988. During the 1987-1988 school year, 2,648 children received at least 60 days of Reading Recovery. Twenty-three regional training sites, 228 school districts, and 416 teachers were involved.

1988-1989. In the 1988-1989 school year a total of 3,344 program children were served (i.e., had at least 60 lessons) by Reading Recovery. Twenty-two teacher training sites operated. Participating school districts numbered 255 with 530 schools offering the program. The total number of Reading Recovery teachers working with children was 755.

Statewide Results The Ohio State Studies 1985-1989

As in the Columbus longitudinal study, children selected for Reading Recovery statewide ranked in the lowest 20 percent in their first-grade classrooms in reading skills. Unlike the Columbus study, however, the state site project had no group of Comparison children against which to measure the Reading Recovery children's progress. Instead, in 1985-1988 the effectiveness of Reading Recovery statewide was measured in this study by comparing the Reading Recovery children with the average bands of first graders determined by a random sample at their respective school sites and by examining their gains during the intervention year. It should be noted 1988-89 data use a statewide average band, rather than the average bands for the respective schools.

Research Questions 1985-1989.

1) What proportion of children served by the Reading Recovery Program statewide were successfully discontinued?

2) What proportions of discontinued Reading Recovery children achieved end-of-year scores equal to or exceeding the average band of their respective school sites?

3) What was the average normal curve equivalent gain score on a nationally normed test for Reading Recovery children?

Results and Analysis.

Question #1: Percentage of children discontinued. The percentage of program children who were successfully discontinued either during the year or at the end of the school year was calculated. During 1985-1986, a total of 110 children were served by the 22 teacher leaders in training. Of that population, 73 percent were discontinued. These results were good considering the fact that all-day training sessions on Mondays allowed teacher leaders to work with children only four days each week instead of the requisite five days.

During the 1986-1987 year, trained teacher leaders taught classes involving 235 teachers at 23 sites in Ohio. Of the 1,130 children who received a full Reading Recovery program (at least 60 days of instruction), 82 percent were successfully discontinued. In contrast to the previous year, all children, except those served by teacher leaders in training, received the requisite 5 days each week. During the 1987-1988 school year, of the 2,648 children who received a full Reading Recovery program, 86 percent were successfully released.

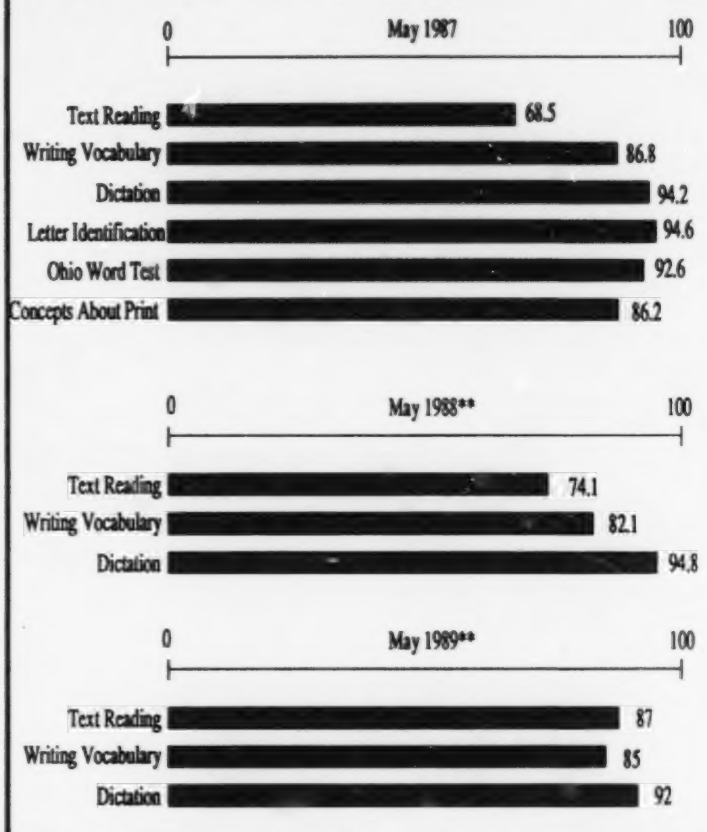
During the 1988-89 school year, 2,777 of the 3,344 who were served by Reading Recovery, 83 percent, were successfully discontinued.

Question #2: Discontinued Reading Recovery children in average band range. To address this question, discontinued Reading Recovery children at each site were compared with the average band of students at their respective school sites. Figure 4 illustrates the percentages of students meeting or exceeding the average band for tests of text reading, writing vocabulary, and dictation at the end of first grade in spring 1987, spring 1988, and spring 1989. The data show that high percentages of Reading Recovery children, ranging from 68.5 percent to 94.8 percent, achieved scores within the average band.

Question #3: NCE gains for Reading Recovery children. All Reading Recovery children were assessed at the entry point of the program and at the end of the year on three scales of a nationally normed test: 1) Reading Comprehension; 2) Sight Vocabulary; and 3) Phoneme/Grapheme: Consonants. The subtests used in 1989 included: 1) Reading Comprehension; 2) Word Recognition; and 3) Vocabulary.

The data show that Reading Recovery children made consistent gains during the first three years of statewide evaluation. For the total group of Reading Recovery children, the NCE gain in Reading Comprehension was 9.6 points in

Figure 4. Percent of Discontinued Reading Recovery Children at Ohio State Sites Achieving Scores Equal to or Exceeding Average Band* at the End of First Grade.



* 1989 average band figure is based on the statewide average rather than the averages for individual schools.

** All measures were not used in 1988 and 1989 because experience had shown that it was unnecessary.

1986-1987, 7 points in 1987-1988, and 15.4 points in 1988-1989; in Sight Vocabulary, 8.1 points in 1986-87 and 4.6 points in 1987-88; and in Phoneme/Grapheme: Consonants, 8.5 points in 1986-87 and 7.3 points in 1987-88. In the 1989 testing, the NCE gains for all Reading Recovery children were 8.2 points for Vocabulary and 21.4 points for Word Recognition. In each case, with the exception of 1989 Vocabulary, which showed the children not discontinued scoring 1.4 points above discontinued children, the NCE gain scores for successfully discontinued Reading Recovery children exceeded the gain scores for not-discontinued Reading Recovery children.

Additional Research Questions 1988-1989

Question #1: What was the progress from entry through end-of-year testing for children discontinued from the program prior to April 1? The progress of children discontinued prior to April 1 on three measures of the Diagnostic Survey are reported in Table 1. Children who have met the criterion of developing reading strategies to be considered discontinued prior to April 1 illustrate in Table 1 the concept of a self-improving system. These children continued to make satisfactory progress and to improve their reading achievement by reading. End-of-year text reading scores for children discontinued prior to April 1 was 20.08. This approximates a 2-2 reading level in basal texts.

Question #2: What was the progress of Not Discontinued Reading Recovery program children? In previous years of the Reading Recovery program, teachers and teacher leaders have become aware of some children who receive 60 or more lessons but are not considered Discontinued; however, improvement and progress can be noted for many of these students. To address question #2 pretest and posttest scores on three measures of the Diagnostic Survey were compared. Of the 3,344 Reading Recovery Program children 567 children were considered Not Discontinued. This number represents 16.9% of the program population. The progress of the Not Discontinued Reading Recovery children is represented in Table 2.

A survey of the individual state site reports indicates that attendance was a primary reason children did not make accelerated progress. Mobility and interrupted service were also identified as contributing factors followed by placement within special education classes and an exceptionally high classroom/school average level or reading performance. Positive gains were noted, however, by parents, classroom teachers, and school staff.

Question #3: What informal resonses to the Reading Recovery

Table 1. Progress Rate of Children Discontinued Prior to April 1

Measure	Mean Scores Fall	Exit	Spring
Writing Vocabulary (Max. = 10 minutes)	5.25	42.59	53.73
Dictation (Max. = 37)	8.74	34.47	35.56
Text Reading (Max. = 30)	.84	12.98	20.08

Fall N = 1,272
Exit N = 1,323
Spring N = 1,300

program were made by trained Reading Recovery teachers, teachers in training, administrators, other teachers in the building, parents of Reading Recovery and the children themselves? A total of 4,537 questionnaires were distributed to trained and in training Reading Recovery teachers, administrators, other teachers in Reading Recovery buildings, and parents. The rate of return was 69%. The overall responses from all groups were positive and supportive. It was generally agreed that the program was very beneficial and should be expanded.

The following comments from various sites around the state are representative of survey results:

Building on the student's strengths:
"Since my involvement in Reading Recovery, I realize the significance of starting the student from what he knows and continuing to build and challenge him to explore the unknown in writing and reading. Writing and reading go 'hand in hand'--one supports the other."

Understanding the reading process:
"Reading Recovery has helped to 'fill in the gaps' in my understanding of the reading process. I used to *assume* that children understood many things that they really didn't. I have learned not to take for granted that children know basic book knowledge."

Effects of Reading Recovery on classroom instruction:
"My goals have changed for what I want to teach my class. I'm trying to make them more independent. I'm using strictly literature for our reading and teaching skills from within these books. Also, I've made a stronger link between their reading and writing. And I've given them many more cooperative writing opportunities.

Developing a self-improving system in students:
"Seeing my students realize that they can read by themselves and for themselves without my help, I guess the best part of it was having students tell me they didn't need me anymore!"

Enhancing professional knowledge:
"Reading Recovery training has been the most intense and difficult work I have ever participated in and the most valuable training and learning I have ever had as a teacher. It was challenging and rewarding. Most important, it has helped me to become a better teacher, a powerful observer, a cautious responder, a recorder [of information] and a listener at the same time, and, always aware of the importance of a positive attitude. Reading Recovery has truly helped me to earn the title of a 'professional teacher!'"

Table 2. Summary of Diagnostic Survey Scores for Not Discontinued Reading Recovery Program Children

Measure	Mean Scores Entry	Spring
Writing Vocabulary	3.03	34.56
Dictation	4.37	30.16
Text Reading	0.40	8.86

N = 567

Reading Recovery/ National Diffusion Network Project

In 1987, Reading Recovery was selected as a Developer/Demonstrator Project of the U.S. Department of Education's National Diffusion Network (NDN). The purpose of NDN is to make exemplary educational programs available to school districts from other states. Two years are required to implement Reading Recovery at another site. During the first year, teacher leaders complete their training at The Ohio State University, participating in a variety of clinical and academic experiences designed to prepare them to work with Reading Recovery children, train Reading Recovery teachers, and implement the program within their school systems. During the second year and subsequent years, teacher leaders train Reading Recovery teachers and continue to work with children at their local sites. To date, sites from eleven states outside of Ohio and two provinces of Canada are participating in the Reading Recovery program. Six additional states have individuals enrolled in teacher leader training at OSU for the 1989-1990 academic year.

Summary

Evidence from the first years of implementation indicates that Reading Recovery has had positive outcomes for children initially determined to be at risk of failure in reading. The great majority of children who receive a full program in Reading Recovery make accelerated progress and perform within the average range for their classes. Children retain their gains and continue to make progress at least 3 years after the intervention. A range of qualitative measures (see OSU Technical Reports) indicate positive responses from classroom teachers and from parents. Reading Recovery teachers have reported growth in knowledge and in skill in teaching reading. The Reading Recovery team, including school district officials, teachers, and OSU personnel, are continuing to study the program carefully. Procedures for training new Reading Recovery teachers and for identifying and working with children, particularly those from highly mobile populations, are being further developed and refined.

1989-1990 Reading Recovery Sites

Ohio Sites

1) Adams County
2) Akron/Kent
3) Ashland College
4) Canton
5) Celina
6) Cleveland State University/ Shaker Heights
7) Columbus
8) East Liverpool
9) Forest Hills
10) Groveport/Upper Arlington
11) Howland
12) Lancaster
13) Licking County/Newark
14) Logan County
15) Lucas County
16) Marion
17) Ohio University
18) Sheffield/Sheffield Lake
19) Steubenville
20) Trotwood
21) Wright State University
22) Zanesville/W. Muskingum County

U.S. Sites

1) Tucson, Arizona
2) Coeur d'Alene, Idaho
3) Champaign, Illinois*
4) Chicago, Illinois
5) Louisville, Kentucky
6) New York, New York*
7) Portland, Oregon*
8) Clemson, South Carolina*
9) Summerville, South Carolina
10) Carrollton, Texas
11) Plano, Texas
12) Richardson, Texas*
13) San Antonio, Texas
14) Fairfax County, Virginia
15) Mercer County, West Virginia
16) Madison, Wisconsin

Canadian Sites

1) Halifax, Nova Scotia
2) Scarborough, Ontario

Reading Recovery will be implemented at the following sites during the 1990-1991 academic year:

1) Fort Benning, Georgia
2) Lake Villa, Illinois
3) Wareham, Massachusetts
4) Western Michigan University
5) Concord, New Hampshire
6) Knox County, Tennessee
7) Salt Lake City, Utah

*Teacher leader training site

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